

## AMENDMENT TO CLAIMS

### *In the Claims*

Please **AMEND** claims 1, 2, 5, 6, 14, 16, 17, 19, 20, 23-26, 28-33, 37, and 43.

Please **CANCEL** claim 18 without prejudice or disclaimer.

A copy of all pending claims and a status of the claims is provided below.

1. (Currently Amended) A workflow management system for automating a business process, comprising:

~~a host computer that controls the system;~~

~~an administrator executable by the computer, wherein the administrator that prepares for manages automating the business process and comprises an organization manager, a role/group manager, an authority manager, a process manager, and a folder manager;~~

~~a process designer executable by the computer, wherein the process designer determines that creates and models flows and properties of the business process and defines an activity that is performed in the business process;~~

~~a database accessible by both the administrator and the process designer, wherein the database stores that compiles organization information, authority information, and folder information on the administrative steps and the properties of relating to the business process;~~

~~a process engine executable by the computer, wherein the process engine that executes and handles the business process and allocates the activity to the participant, monitors a start~~

and end of the activity, facilitates storing a result of the activity, and/or interfaces with the database, another workflow engine, and/or a business application program based on the information on the administrative steps and the flows and the properties of the business process;

a web client, that interfaces with the process engine, the another workflow engine, and/or the business application program, and wherein the web client permits a user to interact with the system; and ~~an application program that can be used for at least one of creating and executing the business process~~

a form generator executable by the computer, wherein the form generator designs and operates an electronic form related to the business process, and wherein the form generator interfaces with the database, the process designer, the process engine, the web client, and/or the business application program.

2. (Currently Amended) The workflow management system of claim 1,

wherein the ~~administrator further comprises: an~~ organization manager ~~that can~~ creates, deletes, and maintains information about a department associated with the business process;

wherein ~~[[a]] the~~ role/group manager ~~that can~~ creates, deletes, and maintains information about a role and a user group associated with the business process;

wherein ~~[[an]]~~ the authority manager ~~that can~~ creates, deletes, and maintains information about ~~authorities~~ an authority ~~[[to]]~~ that can access the business process and the application program, and wherein the authority manager and can further allocates the ~~authorities~~ authority information to the information about the role, the group and a member of at least one of the department and the user group; and

wherein ~~[[a]]~~ the folder manager ~~that can~~ creates, deletes, and maintains information about a folder.

3. (Original) The workflow management system of claim 2, further comprising an object manager, wherein the object manager interfaces the administrator with the database.

4. (Original) The workflow management system of claim 3, wherein the database further comprises:

an organization database;  
authority database; and  
a folder database.

5. (Currently Amended) The workflow management system of claim 1, wherein the process designer comprises:

a graphic designer executable by the computer that ~~[[can]]~~ creates and designs an activity and ~~[[a]]~~ the business process using a graphical user interface; and

a property designer executable by the computer that ~~[[can]]~~ defines a property of the

[[an]] activity to be executed in the business process.

6. (Currently Amended) The workflow management system of claim 5, wherein the ~~processor~~ property designer further comprises an object manager that interfaces the ~~processor~~ designer with the database.

7. (Original) The workflow management system of claim 6, wherein the database comprises:

a process definition folder that contains information related to the business process modeling;

a data folder that contains data generated by the business process execution; and  
an organization folder.

8. (Original) The workflow management system of claim 1, wherein the web client further comprises:

a worklist handler;

a workitem handler; and

a process monitor.

9. (Original) The workflow management system of claim 8, wherein the worklist handler maintains a work list for a user.

10. (Previously Amended) The workflow management system of claim 9, wherein the workitem handler supports execution of the business process.

11. (Previously Amended) The workflow management system of claim 10, wherein the process monitor checks status of the business process.

12. (Previously Amended) The workflow management system of claim 11, wherein the process monitor further checks a history of the business process and current progress of the business process.

13. (Previously Amended) The workflow management system of claim 12, wherein the process monitor further monitors resource utilization.

14. (Currently Amended) The workflow management system of claim 2, wherein the organization manager further creates, deletes and maintains i) information about relationships between the department[[s]], rank[[s]] of ~~the members~~ a member in the department and/or user group<sub>1</sub> and ii) information regarding the member[[s]] in the department and/or user group.

15. (Previously Amended) The workflow management system of claim 14, wherein the organization manager further registers a signature of each member of the department and/or user group.

16. (Currently Amended) The workflow management system of claim 2, wherein the role/group manager [[can]] allocates the member information to the role information and the user group information.

17. (Currently Amended) The workflow management system of claim 2, wherein the authority manager [[can]] allocates the ~~authorities~~ authority information to information about the role, the group and the member of the department and/or the user group.

18. (Cancelled)

19. (Currently Amended) The workflow management system of claim 5, wherein the property designer [[can]] creates, deletes, and maintains ~~set-up~~ a business rule associated with the business process.

20. (Currently Amended) The workflow management system of claim 19, wherein the business rule includes information that defines a term[[s]] associated with the business process, defines a condition[[s]] associated with the business process, and/or defines a transition path to be used after completing when the activity is completed.

21. (Previously Presented) The workflow management system of claim 5, wherein the process designer further comprises a check-out table.

22. (Previously Presented) The workflow management system of claim 21, wherein the check-out table contains information on a process model currently checked-out by a user.

23. (Currently Amended) The workflow management system of claim 22 ~~claim 23~~, wherein the system keeps a currently checked-out process model from being simultaneously checked-out again by another user by referring to the check-out table.

24. (Currently Amended) The workflow management system of claim 1, wherein the process engine comprises:

an interface agent that ~~[[can]] interchanges with other process engines~~ information ~~[[on]]~~  
about a status of the business process with other process engines;

a request manager that receives requests from ~~[[a]]~~ the user, directs the process engine to handle the requests, and returns results to the user;

a dispatcher that retrieves and executes the requests and stores results in the database;

a scheduler;

a security manager that controls a certification process with an outside certification server; and

a database broker that interfaces with the process engine and the database.

25. (Currently Amended) The workflow management system of claim 24, wherein the process engine allocates the at least one activity to the at least one participant and a status the activity activities comprises one of a state states selected from the group consisting of: an initial state; a waiting state; a dead state; a running state; a suspended state; a completed state; a terminated state; an error state; and an overdue state.

26. (Currently Amended) The workflow management system of claim 24, wherein the scheduler manages a deadline of the activity and/or a waiting state of the activity.



27. (Previously Presented) The workflow management system of claim 24, wherein the security manager further encodes and decodes information.

28. (Currently Amended) The workflow management system of claim 25, wherein the activity ~~activities~~ transits among the states according to a business rule.

29. (Currently Amended) The workflow management system of claim 28 ~~claim 26~~, wherein the process engine controls the workflow using a transition count in order to keep a consistency of the transitions between activity states consistent with business process transitions according to a the business rule.

30. (Currently Amended) The workflow management system of claim 29, wherein the process engine sets to zero the transition counts of all the transitions that can be processed in a forward direction from the ~~at least one~~ activity, when the activity is started.

31. (Currently Amended) The workflow management system of claim 30, wherein the process engine further sets to one the transition counts of the transitions stemming from execution of the activity, when the activity is completed.

32. (Currently Amended) A method for automating a business process, the method comprising steps of:

modeling the business process, wherein the step of modeling includes including  
generating an organization chart;

defining an activity that is performed in designing the business process;

accessing, from a database, organization information, authority information, and/or folder  
information relating to the business process ~~compiling the business process in a database;~~

executing the business process, wherein the step of executing the business process  
includes allocating the activity to a participant, and designing and creating an electronic form  
related to the business process; and

monitoring the business process, wherein the step of monitoring the business process  
comprises monitoring a start and end of the activity, facilitating storing a result of the activity,  
and/or interfacing with a workflow program and/or business application program.

33. (Currently Amended) The method of claim 32, wherein the step of modeling the business process further comprises:

mapping at least one of departments, members, member titles and member roles to

generate the organization chart;  
creating a role; and  
allocating an authority to the role.

34. (Previously Presented) The method of claim 32, wherein the step of modeling the business process further comprises:

mapping at least one of departments, members, member titles and member roles to  
generate the organization chart;  
creating a group of human resources; and  
allocating an authority to the group of human resources.

35. (Previously Presented) The method of claim 32, wherein the step of designing a process further comprises:

identifying an activity to be executed; and  
allocating a property to the activity.

36. (Previously Presented) The method of claim 35, wherein the activity comprises:

a start activity that starts a process;  
a normal activity that involves an intervention by a participant;  
a wait activity;  
a mail activity;

an SQL activity that accesses an application database;  
a sub-process activity that comprises a plurality of separate activities;  
an agent activity that automatically activates a program;  
a connector activity; and  
an end activity that represents an end of the process.

37. (Currently Amended) The method of claim 35, wherein the property comprises:

[[a]] participant information that describes an individual that executes the activity;

[[an]] application information that describes a business application to be used by the individual to execute the activity;

[[a]] post-condition information that determines when the activity is completed;

[[a]] schedule information that describes planning of the activity;

[[a]] deadline information that describes timing for executing the activity;

[[a]] sub-process information that describes a location and an option of the sub-process activity;

[[a]] parameter information that defines a value necessary for executing a program in

[[the]] an agent activity;

[[a]] mail-to information that determines [[the]] a recipient of e-mail in [[the]] a mail activity;

[[a]] mail content information that represents the content[[s]] of e-mail in the mail activity;

[[a]] general information that shows [[the]] a name[[s]] and [[the]] description[[s]] of the activity;

[[a]] transition condition information that represents conditions for an input transition and an output transition; and

[[an]] icon information to display an icon on a graphical user interface.

38. (Previously Presented) The method of claim 35, wherein the participant can comprise one of or any combination of a user, a department and the role.

39. (Previously Presented) The method of claim 38, wherein the participant can be a manager of the participant.

40. (Previously Presented) The method of claim 38, wherein the participant can be a peer of the participant.

41. (Previously Presented) The method of claim 38, wherein the participant can be a department of the participant.

42. (Previously Presented) The method of claim 38, wherein activity is allocated based on a workload of the participant.

43. (Currently Amended) The method of claim 32, wherein generating an organization chart comprises mapping information about a department[[s]], a member name[[s]], a member title[[s]], and a member role[[s]].